

Planning a visit to Aberdeen Test Center

Please remember that Aberdeen Proving Ground (APG) is a military installation, controlled and operated by government personnel. All visitors may enter APG by the following:



- If you have a Department of Defense (DoD) ID card, you may enter APG through either the Route 22 (Harford) Gate or the Route 715 (Maryland) Gate.
- If you do not have a DoD ID card, you MUST enter APG through the Route 715 (Maryland) Gate. Effective immediately, no visitors or commercial vehicles will be permitted entry to APG through the Route 22 (Harford) Gate.
- At the Route 715 (Maryland) Gate, you will be issued a day pass. You MUST have some form of valid photo ID, i.e. Drivers License, Passport, etc. This policy includes vehicle passengers, with the exception of minors.
- Day Passes will be valid only for the date issued. There will be no multiple day passes issued.

ATC is located on APG within a controlled security area. An APG security badge must be worn above the waist while inside the controlled area. To expedite issuance of your badge when you arrive, please submit a visit request ahead of time. In order for your visit to be pleasant and productive, please see specific information regarding security badging requirements, safety and other visitor guidelines, on our website at <http://www.atc.army.mil>.

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Commander
USAATC
ATTN CSTE-DTC-AT-CS
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APG MD 21005-5059

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From the ATC Commander

by Colonel Mary Brown, Commander, Aberdeen Test Center



Col. Mary K. Brown

In the spring edition of the Globe, we said farewell to James Fasig and welcomed John Wallace

as the new acting technical director. We are now also welcoming new commanding generals to our higher headquarters. BG James Myles recently took command at the Army Test and Evaluation Command (ATEC). BG Michael Combest is scheduled to become the new commanding general of the Developmental Test Command (DTC).

In addition to the work ATC has been doing to support our Soldiers and the war effort, we are testing in support of Homeland Defense. ATC has the capability to perform testing related to commercial aircraft survivability issues under pressurized flight conditions: for example luggage, shoe bombs, cockpit doors, and overhead storage bins. We are also working with the Transportation Security Administration and Battelle Memorial Institute to develop a program to determine the availability of current technology to scan and identify energetic materials in bulk cargo. The study will evaluate scanning systems to assess their ability to detect and discriminate threats.

ATC established a goal of becoming compliant with international

quality standards by the 1st Qtr, FY05. The motivation for directing resources toward achieving this effort is simple: strengthen the control of our test processes, enhance the quality assurance levels to ensure consistent performance and ultimately, increase customer satisfaction.

As we enter the 4th quarter of FY04, we are on track to meet our goal. Documenting the ATC Quality Management System (QMS) and employee training is nearly complete. The ensuing

weeks will be devoted to conducting internal audits of the system to determine if test project documentation complies with the project management procedures defined in our QMS.

The final step will involve an assessment by our International Organization for Standardization (ISO) Registrar, BvQI. Our expectations are high and our leadership is committed; therefore, we fully intend to celebrate 2005 as an organization compliant with international quality standards. ●



ATC QUALITY POLICY

ATC is committed to providing its customers with continually improved test products and services that:

- *meet all technical requirements*
- *are delivered on time, and*
- *at the agreed-to price*

Armbruster Recognizes ATC's Experimental Fabrication Team

On April 15, Maj. Gen. Robert Armbruster, former commanding General of the Army Test and Evaluation Command (ATEC), recognized ATC's Experimental Fabrication Team for its support to Soldiers in Iraq.

"We're here today to unveil a picture of the Slat Armor and what you've done for it," Armbruster said. "The institution that is this workforce is a national treasure."

The Experimental Fabrication Team worked to assist in the design, fabrication and testing of both the rear protection panel for the Abrams Tank and Slat Armor for the Stryker.

"We face a threat to our soldiers



Brig. Gen. Robert Armbruster unveiled a photo dedicated to ATC's Experimental Fabrication Team for their support to soldiers in Iraq. Photo by Dana Fritts

on what we feel is our most protected vehicle and in less than one week we have a solution," Armbruster said.

The Experimental Fabrication Team also worked with Army Research Lab, General Dynamics Land Systems and Program Manager-Brigade Combat Team to design, fabricate, test and put into

production Slat Armor for eight Stryker vehicle configurations in seven weeks.

The Slat Armor was designed to provide the Stryker with additional protection from rocket propelled grenades.

"You are five for five," Armbruster said. "You have flipped the coin five times and come up heads five times, because a Stryker was hit five times

and survived.

"Thank you on behalf of our Army and our Soldiers. You've gone above and beyond what we've asked and brought our Soldiers back alive."

Article provided by Susan Hagan, ATSS, ATC Public Affairs Office. ●

ATC Globe

On the Cover

A Stryker equipped with slat armor sits on the turning circle of ATC's Munson Test Course.

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Commander COL Mary K. Brown
Editor Vonnie Hughey

Acting Technical Director John R. Wallace
Design International Imaging Center

Roll out Ceremony for the Ukrainian T-80UD Main Battle Tanks

The air was cold and crisp on February 18 as Program Executive Office Simulation, Training and Instrumentation (PEO STRI) hosted a Roll-Out Ceremony for the Ukrainian T-80UD Main Battle Tank at ATC.



A Ukrainian T-80UD Main Battle Tank prepares to give a demonstration of its capabilities as part of the Roll Out ceremony held at Aberdeen Test Center.

“These tanks represent the state-of-the-art in [Ukrainian] tank production...” said Col. Stephen Rust, Office of PEO STRI. “The purpose of this purchase is to add to our fleet of [foreign] combat vehicles, which are constantly used in support of testing and training. These vehicles not only expand our existing fleet of foreign material, but also increase the quality of our training and the value of testing by providing an unmatched level of technology.”

Initial acquisition negotiations for the tanks began in May 2001 when Steve Reeves, an ATC employee representing PEO STRI, traveled to the Ukraine.

In December 2002, Fernando Silva and Phillip Murphy, Aberdeen Test Support Services contractor employees at ATC, participated in three weeks of

operational and maintenance training on the T-80UDs in the Ukraine.

In June 2003, Silva returned to the Ukraine to assist with acceptance testing.

“This transaction did not take place overnight. It took the committed efforts of many individuals from both the Ukraine and the United States working together to make this a success,” Rust said.

The four tanks arrived at ATC throughout December 2003 and January 2004. Initial safety inspections and safety testing will be conducted for PEO STRI. Other testing will also be performed as requested by customers.

“The tanks you see before you will not only allow us to provide

training for our troops that is second to none,” Rust said, “but will also assist us in developing and fielding the most advanced and modern weapon systems so that we can protect the United States and its Allies throughout the 21st Century.”

ATC became a Primary Operations Center for PEO STRI in 1991. Currently, they have 77 pieces of PEO STRI foreign equipment available for use in testing and training. ATC provides maintenance and operator support as well as spare parts for the equipment.

“Because of the excellent partnership between ATC and PEO STRI, we will be able to continue to provide outstanding service to the Warfighter,” said Col. Mary Brown, ATC commander.

Attendees at the ceremony were given the opportunity to examine the vehicles and were given a brief demonstration of some of its capabilities.

Article provided by **Susan Hagan**, ATSS, ATC Public Affairs Office. ●

ATC Globe

Marvin Maule Retires After 38 Years

Marvin M. Maule, Chief of the Small and Medium Caliber Systems Team, retired on June 30 after 38 years of Federal service.

During his retirement ceremony, Maule received numerous gifts and awards. Roger Brown, representing PEO Soldier, presented Maule with a letter of appreciation and a plaque. Brown praised Maule for his outstanding support of developmental testing for PEO Soldier.

Maule also received gifts of appreciation on behalf of the Firepower Core; a letter from the President of the United States; a Governor’s Citation; the Department of the Army Certificate of Appreciation; the Department of the Army Commander’s Award for Civilian Service; and his retirement certificate.

“When Marvin talks, I listen,” said Col. Mary Brown, ATC commander. “Because he knows what he’s talking about. During his 21



Col. Brown presents Marvin Maule with the Department of the Army Certificate of Appreciation.



Roger Brown, PEO Soldier Liaison Office, APG, presents Marvin Maule with a certificate of appreciation.

years as a supervisor, Marvin and his team of test directors have built a reputation for excellence and a body of testing knowledge and experience that cannot be equaled anywhere else. Systems such as the Vulcan Air Defense System, Squad Automatic Weapon, M4 Carbine, Common Remotely Operated Weapon Station, and XM8 Carbine System are but a

few of the many weapons, munitions, and system components that have undergone rigorous development and production testing. His team was also the first to test non-lethal munitions for the Army.”

Maule earned a degree in mechanical engineering from Purdue University in 1966. After graduation, he enlisted into the Army for two years. His last year of active duty as a Specialist 5th Class was served at Development and Proof Services (now ATC).

After the Army, he joined ATC in 1968 as a test director in the Small Arms Unit, where he remained for eight years before becoming a unit supervisor. Maule has spent the last 21 years as a supervisor in the small

arms arena.

After retirement, Maule plans to visit family and do some hiking and camping.

We at ATC wish Marvin all the best.

Article provided by **Vonnie Hughey**, Command Staff. ●

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VIP Visits/Tours Hosted at Aberdeen Test Center



Brig. Gen. James Myles (right), new Army Test and Evaluation Command (ATEC) commanding general, listens as John Ruhl, director of Warfighter Core provides an overview of ATC's capabilities during his orientation visit and tour in June. He was very impressed by the ATC workforce and all of the great work ATC does for the Army and other customers.

Charlie Valz (left), director of the Survivability/Lethality Core briefs the Honorable Walter Hollis, current Deputy Under Secretary of the Army (Operations Research). Mr. Hollis visited ATC on July 8 to hear briefings on Aberdeen Test Center's capabilities. To Hollis' left is Mike Cast, of the Developmental Test Command public affairs office.



Brig. Gen. McNamara, commander of the Developmental Test Command listens as Cory Hubbard, ATC test director, presents an overview on a firing program.



A team from the Department of Defense Test Resource Management Center (DTRMC) spent several days at ATC gaining a better understanding of the costs associated with running a major range and test facility base (MRTFB). The DTRMC's team got an overview and a tour of ATC's facilities and resources. ATC is one of Developmental Test Command's MRTFB's.



Brig. Gen. Mike Lenaers (center), commanding general of the U.S. Army Ordnance Center and School listens as Dr. Greg Schultz presents an overview of the Roadway Simulator. To Lenaers' left is Col. Mary Brown, ATC commander, and to his right is John Wallace, ATC acting technical director.

The senior senator from Massachusetts, Sen. Ted Kennedy, right, clasps hands with Col. Mary Brown, ATC commander, as he arrives for a tour of Aberdeen Test Center. Brig. Gen. McNamara, commander of the Developmental Test Command looks on during the introductions.



ATC Employee Selected for U.S. Army War College



Mike Zweibel

Congratulations are in order for Mike Zweibel, director of Technology Core, for his selection to attend the U.S. Army War College at Carlisle, Pennsylvania, from July 2004 to June 2005. This prestigious institute prepares senior military officers and civilians for strategic leadership responsibilities.

During Zweibel's farewell ceremony, Colonel Mary Brown, ATC commander, told Zweibel, "Thank you for everything you have done for the organization. It has been a pleasure working with you. You are going to have a great year. Enjoy it."

Zweibel's ATC career spans 22 years, serving in two leadership positions to include his current position as director of Technology Core and his previous

assignment as chief of the Instrumentation Development Team.

"During my 22 years at ATC, I have seen things I thought I would never see," said Zweibel. "I have seen the world. I have literally been places I've never dreamed of. Thanks to everyone for coming to see me off."

We wish Zweibel well in his studies and future endeavors.

Article provided by **Vonnie Hughey**, Command Staff. ●

SWCC Rescues Stranded Motorist

A Special Warfare Combat Crewman (SWCC) visiting ATC rescued a stranded motorist during the heavy rainstorms that flooded the road as they moved through Aberdeen Proving Ground (APG) on July 12.

While traveling from the Shopette to his room at the Swan Creek Inn during the storm at around 6 p.m., Damage Control First Class Petty Officer Robert Kelly came upon George Alexander stranded in his car in the rapidly rising waters in front of the Burger King on Maryland Blvd.

A utility truck sat on one side of the flood while APG Police and Fire Department officials evaluated the situation from the other side.

"The car was stopped 200-300 yards out and had water up to its

windows," said Kelly. "Mr. Alexander was sitting in the window of his vehicle."

Kelly informed the utility worker that he was going after Alexander and went to his Navy truck for a length of 1 inch tubular and a life vest. After tying the tubular to the utility truck's bumper, Kelly made his way through the water over to the stranded motorist as the utility worker fed out the line.

After helping Alexander into the life vest, both men made it safely back through the current. Unfortunately, Alexander's briefcase remained on the hood of the car.

"The guy was stuck in his car," Kelly said. "I figured I could help him out."



Kelly is the new primary point of contact between ATC's Warfighter Team and the Special Warfare Command (SPECWARCOM) located in Little Creek, Va. He was visiting ATC in order to prepare for an upcoming training mission.

Article provided by **Susan Hagan**, ATSS, ATC Public Affairs Office. ●

Roadway Simulator Testing – Marines SCAD Vehicle

The first phase of the Roadway Simulator was commissioned in April 03. Since that time, the simulator has been used to test the safety and performance of Up-Armored HMMWV and FMTV trucks, commercial Sport Utility Vehicles (SUVs), a High Mobility Engineering Excavator, motor sports vehicles, and other military vehicles.



The Standoff Chemical Agent Detector Van undergoes safety and vehicle handling tests on the Roadway Simulator.

Perhaps the clearest example of the benefits of the Roadway Simulator to the acquisition community resulted from the recent test of the Marine Corps Standoff Chemical Agent Detector (SCAD) Van.

This vehicle is essentially a first-response vehicle for homeland defense, and is a military adaptation of a Ford E350 Van. The original production van was converted to four-wheel-drive and payload with very heavy detector equipment, significantly raising the vehicle center of gravity and increasing the gross vehicle weight.

Safety and vehicle handling tests performed on the Roadway Simulator allowed ATC engineers to accurately assess the safety and performance of the "as delivered" SCAD Van and systematically re-engineer the suspension system

and wheels/tire configuration to enhance performance and safety.

These changes greatly improved the life of the tires, increased the rollover threshold approximately 12 percent, and made the handling characteristics much safer for typical Marines by considerably extending the understeer range of the vehicle. Within a week's time an unsafe, unpredictable vehicle system was re-engineered by the testers to become a well-behaved and much safer system. Tire life was also extended considerably.

While concurrently running customer tests on the simulator, a number of significant technical achievements have been made.

First, a number of steady-state and transient steering and handling tests were validated on the machine, including constant

radius skidpad and double-lane-change maneuver.

Most notable was the Fishhook test used by the National Highway Traffic Safety Administration to evaluate the rollover propensity of passenger vehicles, particularly SUVs. Tractive effort and cooling tests were also validated on the machine.

Lastly, for the first time anywhere, the ability to test tandem-axle trucks on this type of technology was just demonstrated. The tandem-axle effort marked the successful integration of Phase 2.

Planned accomplishments for the remainder of this year and next fiscal year are centered around the integration of Phase 3 for testing tractor trailer combinations. This has never been attempted anywhere in the world. The majority of the Phase 3 hardware is complete and the staff at the simulator has recently developed a new set of dynamics/control equations that should make this goal very achievable.

For more information, contact **Dr. Greg Schultz** at 410-278-3510 (DSN 298), e-mail: gregory.schultz@atc.army.mil. ●

ATC Participates in Robotic and Automotive Technologies for the Marketplace

On June 3, ATC participated in “Robotic and Automotive Technologies for the Marketplace”, an Aberdeen Proving Ground (APG) technology partnering showcase.

The showcase, held at APG’s Top of the Bay, was designed to highlight APG’s robotic and automotive technologies available for commercial application. Attendees had the opportunity to explore these technologies and learn how they can use APG resources and expertise to bring products and services to the market. Presenters included ATC, the Army Materiel Systems Analysis Agency, the Army Research Laboratory (ARL), the Developmental Test Command (DTC) and the Edgewood Chemical Biological Center.

“We are delighted that businesses and entrepreneurs are exposed to and can subsequently capitalize on the wealth of technology being developed at APG,” said Dr. David Brown, director for test and technology at DTC, “This showcase is an excellent forum to present technology transfer opportunities that have the potential to spur the region’s economic growth, create new products that can revolutionize many industries, and benefit the military as well.”



Lt. Col. Michael Ferry, ATC, shows a Stryker equipped with Slat Armor to attendees at the Robotics and Automotive Technologies for the Marketplace showcase.

Presentations included a case study on how ATC helped the Maryland Transit Administration to solve the urban transit bus wheel problem; technical sessions on automotive and robotic technology and testing, automotive materials technology and data analysis, and instrumentation; and briefing on APG technology transfer and Technology Development Corporation technology transfer funding.

Vehicles on display from ATC included a Stryker and the Marine Corp’s Medium Tactical Vehicle Replacement Truck.

A tour of select ATC and ARL facilities was also offered at the showcase and included stops at

ATC’s Roadway Simulator, Munson Test Course and Vibration Facility as well as ARL’s Tactical Environment Simulation Facility and Robotics Course.

Over 200 people attended the showcase, including scientists, engineers, professors and marketers.

“ATC made some very valuable contacts that will undoubtedly result in future increased workload,” said Cindy Grove, a business development specialist for ATC.

Article provided by **Susan Hagan**, ATSS, ATC Public Affairs Office. ●

PAAF Aircrews Receive Underwater Egress Training



Crew Chief Chris Jones prepares to be inverted underwater in order to use the Helicopter Emergency Egress Device (HEED) for the first time.

Crews from Phillips Army Airfield flew to Norfolk Naval Air Station, Va., to obtain underwater egress, helicopter emergency egress device emergency air bottle, and helicopter dunker training for their annual Safety Day April 26. Navy flight crews receive this training in flight school since most of their flying is conducted over water. Although the majority of Army flying takes place over land, the PAAF aircrews rarely leave the airfield without traveling over water. The aircraft are equipped with life rafts and flotation gear; however, training in the use of this equipment is essential.

“This training greatly increases survivability for both crewmen and passengers in the unlikely event of a controlled ditching or malfunction requiring a water landing,” said John Mullin, airfield commander. “By having the training, crewmen will be much better prepared to assist passengers in a ditching situation.” Prior to beginning the training, individuals were required to pass a Navy class II swimming test to demonstrate proficiency in basic swimming skills and methods of staying afloat. This test is done in full flight gear: flight suit, boots, vest, gloves, and helmet.

“Crews practiced at a local swimming pool once a week for about a month prior to the trip to Norfolk to get everyone used to the extra weight of the gear in the water,” Mullin said.

Dunker Training

The helicopter dunker is a mockup of the interior of a generic aircraft with cutouts for windows and a main cabin door. Seats are arranged representative of actual helicopter seating. The device resembles an oversized 55-gallon drum and is suspended above the swimming pool by cables.

Students enter the device from an elevated platform and are assigned seats by number. Once everyone is strapped in, the device is allowed to fall to the water where it promptly sinks and rotates 180 degrees to an inverted position to simulate what would occur in an actual helicopter ditching. Students are instructed to wait for a 10 second count before un-strapping and exiting the helicopter. Once out of the device and clear, each student swims to the surface and exits the pool. This is repeated three times in different seat positions each time.

The last time, difficulty is increased by blindfolding the students.

The technique taught is to use



The helicopter dunker training device simulates an actual helicopter landing in the water then rolling inverted.

handholds to guide the way to the exit rather than the eyes since in a real situation, the water would be darkened and sight would be limited or nonexistent.

Underwater Egress

Training was also received in a shallow water egress trainer, which utilizes the shallow end of the pool set up with a training device that will invert the student and require him to swim underwater in an encaged area to an egress door prior to surfacing.

This device is combined with helicopter aircrew breathing device bottle training which gives the aircrew member approximately two minutes of breathing air to allow time to un-strap and make his way to an exit. The HABD resembles a miniature scuba tank and operates on the same principal. It is small enough to fit in the survival vest worn by each crewman.

For more information contact **W. Allan Johns** at 410-278-4019 (DSN 298), e-mail: william.johns@atc.army.mil. ●